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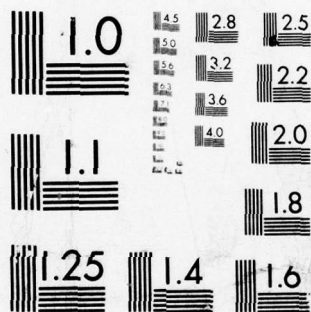
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SOVIET DEFENSE MANPOWER

Rex D. Minckler
Robert N. Ginsburgh
Richard G. Rebh

OCT 6 1977

A Summary Report on the Proceedings
And Results of a Seminar for

THE DIRECTOR OF NET ASSESSMENT
OFFICE OF THE SECRETARY OF DEFENSE

and

THE ASSISTANT SECRETARY OF DEFENSE FOR
MANPOWER, RESERVE AFFAIRS, AND LOGISTICS

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EXECUTIVE SUMMARY

INTRODUCTION

No net assessment of the overall military capabilities of one nation vs those of another nation would be meaningful without a detailed evaluation of the defense manpower of both nations -- their major characteristics, similarities, dissimilarities, strengths, and weaknesses. In the case of the United States, the collection, analysis, and organization of data on defense manpower tends to be a relatively straightforward process, but Soviet defense manpower is seldom studied in depth because the process is generally quite difficult, time-consuming, and demanding -- particularly in view of the secrecy which normally shrouds matters pertaining to the defense and internal security of the U.S.S.R. In this context, a seminar was planned and conducted by the General Electric Center for Advanced Studies (GE-TEMPO) for the Director of Net Assessment, Office of the Secretary of Defense (OSD/NA), and the Assistant Secretary of Defense, Manpower and Reserve Affairs (ASD/M&RA) on January 28, 1977. The overall objectives of this seminar were to highlight some of the major problems involved in assessing Soviet defense manpower and to discuss some of the approaches to these problems.

More specifically, the stated objectives of this seminar were to discuss:

- Factors and trends pertaining to the quality, as well as numbers, of Soviet defense manpower -- where the subject of Soviet defense manpower is considered to include not only the highly visible order-of-battle forces, but also the much more difficult to identify and assess supporting defense infrastructure.
- The impact of Soviet demographic trends and the continuing militarization of Soviet society upon Soviet defense manpower problems and options, to include possible:
 - Attendant difficulties for the Soviet Union in the future, and
 - Related implications for the U.S.

With these objectives in mind, the seminar was designed to highlight the insights, observations, and suggestions of a panel of Soviet manpower experts consisting of:

- Professor John Erickson, Director of Defense Studies at the University of Edinburgh;
- Mr. James T. Reitz, Senior Soviet Analyst, GE-TEMPO;

- Dr. Murray Feshbach, Chief of the U.S.S.R./East Europe Branch of the Foreign Demographic Analysis Division in the Department of Commerce; and
- Ms. Harriet Fast Scott, Senior Soviet Analyst, GE-TEMPO.

HIGHLIGHTS OF THE PRESENTATIONS

The highlights of the seminar may be generally summarized in terms of the presentation of each panelist and the general discussion which followed these presentations. In this context, the highlights of the panel presentation are as follows:

Professor John Erickson

In discussing the problems of studying Soviet defense manpower in light of language, terminology, and conceptual difficulties, Professor Erickson stressed the importance of acquiring an understanding of Soviet terminology so that it is possible to perceive Soviet manpower problems as the Soviets themselves view them. He then defined and discussed the following three major categories of military manpower problems which confront the Soviets:

- Military manpower in general, which includes the nature of Soviet manpower entering the Armed Forces, problems of cost and efficiency, the stamina of Soviet military personnel, and the military profession as a career;
- The Soviet officer corps, which constitutes a narrower, but more difficult, spectrum of problems to assess from the standpoint of improvements in the tactical, technical, and professional competence of Soviet officers -- in particular, the advantages vs the risks to the Armed Forces and the Party of giving the Soviet officer corps a "massive dose of education"; and
- Military performance and utilization, which constitute the most difficult category of problems, especially in terms of trying to understand the meaning of standard Russian terms, such as objectiveness -- which could mean efficiency, effectiveness, or efficacy.

Mr. James T. Reitz

In his discussion of the Soviet military-industrial complex, Mr. Reitz presented an insight into a series of selected government agencies which have contributed in the past, and seem likely to contribute in the future, to the overall Soviet military posture. These agencies include the Soviet Ministry of Defense (MoD) and such non-MoD organizations and systems as the KGB border troops and MVD internal troops, the militia or civil police, national transportation, communications; and public health systems, and the counterintelligence activities of the KGB.

Mr. Reitz observed that many of these non-MoD activities (which are mostly service, rather than production-oriented) are either wholly or partially militarized in terms of the following characteristics:

- They are armed and have wartime, as well as peacetime, missions to assist MoD forces;
- The units are distinguished by uniforms, ranks, grades, organizational structures, and codes of discipline similar to those in regular military organizations; and
- Most of these organizations have separate facilities and services, such as professional and dependent schools, housing, and medical services.

As Mr. Reitz observed, the numbers of personnel involved in the various non-MoD military activities which he discussed probably run in the millions. However, these figures do not include the huge part-time efforts of Soviet manpower involved in premilitary training programs and the interwoven, overlapping, nationwide complex of voluntary societies for cooperation with one or another of the Soviet Armed Forces, such as DOSAAF. All of these organizations make some contribution to the Soviet military and to the overall militarization of Soviet society. Conversely, all of them represent a military-related burden on the Soviet economy. Hence, the level of their contributions to Soviet defense and internal security and their cost to the Soviet economy will continue to remain obscure until additional research efforts are applied to these areas.

Dr. Murray Feshbach

In his discussion of Soviet demographic trends, Dr. Feshbach stressed the importance of interdisciplinary efforts as the key to the analysis of broad, complex issues -- such as the net assessment of U.S. and Soviet defense manpower. He contends that the Soviets will be confronted with a manpower crisis during the 1980s because demographic shifts and constraints are going to precipitate political, military, and economic pressures in the Soviet Union beyond any degree that the Soviets have thus far encountered.

In discussing the projected crisis, Dr. Feshbach cited the following significant demographic trends:

- By the end of the century, it is expected that the Soviet growth rate will drop from its present rate of 1% (1966 to 1970) to around 0.6%. In Central Asia, however, the growth rate is increasing dramatically (e.g., approximately 40% during the period 1959-1970).
- With respect to the Soviet Union as a whole, "over-age" people represented 10% of the aggregate population in 1950, but will increase to approximately 20% by the year 2000. However, in Central Asia, the proportion of persons in the over-age group will decline.

- Due to World War II, women have become an important segment of the working force; for example, they currently constitute 30% of the construction labor force -- performing both construction and clerical duties.
- Within the Soviet Union, there are between 100 and 140 different nationality groups and language groups. This presents a problem in light of the declining proportion of Great Russians in the total population of the Soviet Union.
- During the past 2 years, a significant increase in the aggregate death rate by 0.6 per 1000 and a major increase in infant mortality (i.e., from 22 per 1000 in 1971 to 28 per 1000 in 1974) have been observed.

Ms. Harriet Fast Scott

Ms. Scott described the "iceberg" technique that is being utilized in ongoing assessments of Soviet military manpower in such defense-related sectors as:

- Civil defense;
- The Soviet All-Union Voluntary Society for Cooperation with The Army, Air Forces, and Navy (DOSAAF);
- The military commissariat system; and
- Initial military training.

This technique is so identified because it is based upon the assumption that, by identifying the general officers and other senior officers at the top of a military organization (i.e., the "tip of the iceberg"), one can project the organization beneath them and estimate its size.

Utilizing this technique, Ms. Scott has estimated the military manpower involved in Soviet Civil Defense as being in the order of 100,000.

CONCLUSIONS AND RECOMMENDATIONS

Although there was no attempt to attain a consensus with regard to any of the problems and issues discussed during this seminar, it did appear that there was a general consensus that, although the Soviet Armed Forces do constitute a formidable threat, the Soviets are not without some serious manpower problems which warrant continuing study in order to better assess the implications for the United States. Some of these major problems were identified as follows:

- The decrease in the pool of available manpower during the 1980s;
- The concurrent increase in ethnic minorities -- the Central Asians, in particular;
- The overall quality (skill, education, and performance) and stability of the Soviet officer corps -- the lower ranks, in particular; and
- The underlying morale, motivation, and ultimate performance of the Soviet troops themselves in the event of war.

In the case of some of the issues discussed, there was a divergence of opinion, and the panel presentations and general discussion also raised a number of questions which, it was agreed, warrant further investigation and discussion.

FOREWORD

This summary report on Soviet Defense Manpower provides an insight into the proceedings and results of a seminar conducted by the Net Assessment Programs Office of the General Electric Center for Advanced Studies (GE-TEMPO) at 777 14th Street, N.W., Washington, D. C. on January 28, 1977. Taken together, the seminar and report constitute one element of the FY 1977 net assessment program for the Director of Net Assessment, Office of the Secretary of Defense (OSD/NA), and the Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics (ASD/MRA&L), on U.S./U.S.S.R. defense manpower under contracts DNA 001-75-C-0075 and DNA 001-77-C-0168 with the Defense Nuclear Agency. A complete version of this report with the same title, but identified as GE 77 TMP-18, is available to interested individuals from the Defense Documentation Center, Cameron Station, Alexandria, Virginia 22314.

GE-TEMPO gratefully acknowledges the guidance and assistance provided by Messrs. Peter Sharfman of OSD/NA and David Smith of OASD/MRA&L in the planning and preparations for this seminar.

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A: A List of the Participants in the Seminar

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SOVIET DEFENSE MANPOWER

INTRODUCTION

In this age of technology wherein the apparent, and undoubtedly vital, preoccupation is "building better mouse traps", the importance of the human element -- manpower -- may oftentimes be subordinated. Yet, no net assessment of the overall military capabilities of one nation vs those of another nation would be meaningful without a detailed evaluation of the defense manpower of both nations -- their major characteristics, similarities, dissimilarities, strengths, and weaknesses. In the case of the United States, the collection, analysis, and organization of data on defense manpower tends to be a relatively straightforward process, but Soviet defense manpower is seldom studied in depth because the process is generally quite difficult, time-consuming, and demanding -- particularly in view of the secrecy which normally shrouds matters pertaining to the defense and internal security of the U.S.S.R. In this context, a seminar was planned and conducted with the overall objectives of highlighting some of the major problems involved in assessing Soviet defense manpower and discussing some of the approaches to these problems.

Seminar Objectives

More specifically, the stated objectives of this seminar were to discuss:

- Factors and trends pertaining to the quality, as well as numbers, of Soviet defense manpower -- where the subject of Soviet defense manpower is considered to include not only the highly visible order-of-battle forces, but also:
 - The much more difficult to identify and assess supporting defense infrastructure,
 - The burden with respect to the Soviet economy, and
 - Options and tradeoffs with respect to other sectors of Soviet society.
- The impact of Soviet demographic trends and the continuing militarization of Soviet society upon Soviet defense manpower problems and options, to include possible:
 - Attendant difficulties for the Soviet Union in the future, and
 - Related implications for the U.S.

Seminar Agenda and Participants

With these objectives in mind, the seminar was designed to highlight the insights, observations, and suggestions of a panel of Soviet manpower experts consisting of:

- Professor John Erickson, Director of Defense Studies at the University of Edinburgh;
- Mr. James T. Reitz, Senior Soviet Analyst, GE-TEMPO;
- Dr. Murray Feshbach, Chief of the U.S.S.R./East Europe Branch of the Foreign Demographic Analysis Division in the Department of Commerce; and
- Ms. Harriet Fast Scott, Senior Soviet Analyst, GE-TEMPO.

The presentations of these panelists served as the basis for a general discussion with the other participants in the seminar who are identified in the appendix to this report.

HIGHLIGHTS OF THE PRESENTATIONS

The highlights of the seminar may be generally summarized in terms of the presentation of each panelist and the general discussion which followed these presentations. In this context, the highlights of each presentation are as follows:

"Some Observations on the Quality of Soviet Manpower" by Professor John Erickson

In discussing the problems of studying Soviet defense manpower in light of language, terminology, and conceptual difficulties, Professor Erickson stressed the importance of acquiring an understanding of Soviet terminology so that it is possible to perceive Soviet manpower problems as the Soviets themselves view them. In this context, he urged the development of a simple glossary of Soviet manpower and training terms, which would obviously be quite useful to U.S. analysts and, quite possibly, to the Soviets themselves. Professor Erickson next discussed the following three major categories of military manpower problems which confront the Soviets:

Military manpower in general

These problems are easy to discuss with the Soviets and do not involve any great difficulties. The spectrum of subjects included within this category encompasses the nature of Soviet manpower entering the Armed Forces, problems of cost and efficiency, the stamina of Soviet military personnel, and the military profession as a career.

The Soviet officer corps

These problems constitute a narrower, but more difficult, spectrum to assess from the standpoint of improvements in the tactical, technical, and professional competence of Soviet officers. Professor Erickson observed that:

- The Soviets are confronted with a long-term dilemma in terms of developing officers with "culture" who may subsequently be at odds with the Soviet Government and society. The term "culture" is used in the sense of reflecting an officer's overall performance, potential, capability, and utility -- both to the military system and to the Soviet society. The pattern of education for Soviet officers is now well established and implies simply more and more education until it "comes out of their ears." In other words, the young Soviet officer should not feel that his options are limited, but that his "tactical horizon" has been widened and his tactical dexterity and effectiveness improved. This "massive dose of education" might well serve a number of purposes, but it also entails great risks and may simply compound Soviet difficulties.
- The Soviet junior officer is perhaps the hardest worked man in the Soviet Armed Forces, and he spends 12 years being educated -- which is a long time. But, in their search for greater efficiency throughout the Armed Forces, the Soviets are, in effect, depriving themselves of the very services of the people whom they need to produce this efficiency. These junior officers are being constantly pushed by the system and are given work loads which are really very difficult to satisfy. It is a brutal, hard-driving, and actually fearsome life for these junior officers due to shortcomings in equipment, technical proficiency, and training. However, the Soviets attempt to compensate for these shortcomings by sheer brute drive. This is a general problem throughout the Soviet Armed Forces which is certainly reflected in Marshal Kulikov's statements. Although the Soviets are well aware of the stress under which a Soviet junior officer labors, the numerous problems in his career, and the threat to his family structure, there seems to be a marked reluctance to deal with these problems in other than the most general terms.
- Our insight into the East European countries does provide a fairly good insight into the Soviet officer corps and the military system in general.

Military performance and utilization

These problems constitute the most difficult category of problems -- especially in terms of trying to understand the meaning of the standard Russian term, objectiveness, which could mean efficiency, effectiveness, or efficacy. Soviet officers themselves admit that they do not know just what this term means. Once again, Professor Erickson emphasized the need

to understand the language of Soviet military manpower practices and, in particular, the terminology of social and technical usage, the degree to which their terminology is technical, and to what degree much of it is just unlearned verbiage. The Russian language lends itself very readily to a kind of easy bombast, and there is a sort of Russian Hegelianism which seems to encourage this involved verbiage. Once into this area, you're forced to follow the train of discussion and problems like a musical score, and the Soviets are constantly "switching keys" and you constantly have to "de-code" them. In this context, one must repeatedly ask himself such questions as:

- Are they using the term in a social sense?
- Is it a technical/military term?
- Has he read it in literature? or
- Is he accomplished or incompetent?

Nonetheless, Professor Erickson feels that there is adequate evidence, both direct and indirect, to initiate some analyses of Soviet manpower utilization; that is:

- How wasteful are they?
- How effective are they?
- What is it that they are trying to improve?

These questions might be addressed particularly well in terms of microunits and microtactics.

"An Overview of Manpower in the Soviet Military-Industrial Complex" by Mr. James T. Reitz

In his discussion of the Soviet military-industrial complex, Mr. Reitz presented an insight into a series of selected government agencies which have contributed in the past, and seem likely to contribute in the future, to the overall Soviet military posture. These agencies include the Soviet Ministry of Defense (MoD) and such non-MoD organizations and systems as the KGB border troops and MVD internal troops, the militia or civil police, national transportation (i.e., railway, highway, merchant marine, river fleet, oil pipeline, and civil air transport) systems, the communications system, the public health system, and the counter-intelligence activities of the KGB.

MoD Manpower

In discussing the MoD, Mr. Reitz stated that Western observers estimate the current strength of the Soviet Armed Forces in open publications to be in the order of 3,575,000. In his opinion, however, this figure is low, because it does not include satisfactory estimates of such elements of the Soviet Armed Forces as civil defense troops,

railway and construction troops, road construction troops, and oil pipeline troops. Mr. Reitz also stated that the ratio of MoD civilians, uniformed or otherwise, to troops is another very nebulous, but important, area because MoD civilian and military personnel (either separately or jointly) manage literally hundreds of activities, such as manufacturing plants, collective farms, post exchanges, book stores, libraries, clubs, sanatoria, and tourist camps.

Non-MoD Militarized Manpower

In discussing the selected group of non-MoD military activities (which are mostly service, rather than production, oriented), Mr. Reitz observed that many of these non-MoD activities are either wholly or partially militarized in terms of the following characteristics:

- They are armed and have wartime, as well as peacetime, missions to assist MoD forces;
- The units are distinguished by uniforms, ranks, grades, organizational structures, and codes of discipline similar to those in regular military organizations; and
- Most of these organizations have separate facilities and services, such as professional and dependent schools, housing, and medical services.

According to Mr. Reitz, the KGB border troops and the MVD internal troops, though categorized in the West as paramilitary forces, are actually integral elements of the Soviet Armed Forces and number in the order of 200,000 and 230,000, respectively. These elite bodies of troops are well-equipped with such equipment as light armor, artillery, transport, armored personnel carriers, light aviation, and river craft. Both KGB and MVD troops have a long record of loyalty to the regime and of repressing their fellow countrymen. Mr. Reitz also addressed the all-pervasive quality of KGB counterintelligence and internal security elements which constitute a huge, semi-militarized organization with a system of ranks and grades and tentacles which penetrate all sectors of the Soviet Government, administration, the Armed Forces, and society.

As Mr. Reitz observed, given the overall size of the Soviet population, the far greater Soviet police activities, and the Soviets' penchant to "featherbed", a militia body 2-2½ times the number of U.S. paid policemen (i.e., 400,000) does not appear to be unlikely. Another militia-like body that he identified is the militarized MVD Fire Command, which is organized in battalion, company, and platoon-sized units and maintains working contacts with the Soviet civil defense staffs.

National Transportation Systems. In describing the functions and manpower of a spectrum of Soviet federalized transportation systems, Mr. Reitz observed that most of these activities are militarized to some

degree, have hierarchical rank structures, and possess their own school systems. To some extent, all of the national transportation systems participate in the day-to-day operations of the Soviet Armed Forces. Other significant observations with regard to these systems may be briefly summarized as follows:

- The Soviet railway system is the world's largest under single management with a reported 2.5 million employees;
- The Soviet highway system is less important for military logistic support than the railway system, but it is of growing tactical significance in the short-haul field -- as was evidenced in Czechoslovakia in 1968;
- The Soviet merchant fleet is now approximately fifth in size among the world's fleets with an estimated 290,000 employees;
- The Soviet merchant, fishing, and oceanographic fleets all engage in extensive collection of intelligence and in providing support for subversive activities;
- Although little publicized, the Soviet river fleet, with an estimated 115,000 employees, still handles more bulk cargo than does the merchant marine;
- The Soviet oil pipeline system has been expanding rapidly, and of extreme importance in any Warsaw Pact military operations within Europe is the "Druzhba" or "Friendship" pipeline which extends from deep within the Soviet Union to Czechoslovakia, Hungary, Poland, and East Germany;
- The Soviet civil air transport system (Aeroflot) is the world's largest single airline with an estimated 300,000-400,000 employees and, although Aeroflot handles only about 0.5 percent of the total Soviet freight, it does have obvious tactical and strategic significance from the standpoint of military operations -- such as the recent airlifts of large numbers of Soviet conscripts to the Groups of Soviet Forces/Germany (GSFG);
- The Soviet Civil Air Ministry, which controls Aeroflot, is itself militarized and uniformed and for decades has been headed by active Soviet Air Forces officers;
- The Soviet communications and public health systems, which are estimated to employ more than 7 million people, are quite highly regimented and provide significant support to the Soviet defense sector -- for example, the MoD uses the civil wire system from its headquarters down to the military district level, in addition to its own radio system; and
- Soviet public health services and military medical facilities have had a close working relationship for decades.

Summary. As Mr. Reitz observed, the numbers of personnel involved in the various non-MoD military activities which he discussed probably run in the millions. However, these figures do not include the huge parttime efforts of Soviet manpower involved in premilitary training programs, which are mandatory for students, or the civil defense program, which is mandatory for almost all Soviet citizens. Also excluded from his discussion were the interwoven, overlapping, nationwide complex of voluntary societies for cooperation with one or another of the Soviet Armed Forces, such as DOSAAF. All of these organizations make some contribution to the Soviet military and to the overall militarization of Soviet society. Conversely, all of them represent a military-related burden on the Soviet economy. Hence, the level of their contributions to Soviet defense and internal security and their cost to the Soviet economy will continue to remain obscure until additional research efforts are applied to these areas.

"Soviet Demographic Trends and Possible Implications for Soviet Defense Manpower Planning" by Dr. Murray Feshbach

In his discussion of Soviet demographic trends, Dr. Feshbach stressed the importance of interdisciplinary efforts as the key to the analysis of broad, complex issues -- such as the net assessment of U.S. and Soviet defense manpower. An analysis which is limited solely to the demographic perspective of an issue, or solely to the economic perspective, or solely to the military perspective, flies in face of the fact that the clearest view of an issue emerges when these disciplines work in combination. The implications of the most broad and important issues extend into the realm of political, military, and economic factors. Therefore, interdisciplinary analyses will produce the best results.

Dr. Feshbach contends that the Soviets will be confronted with a manpower crisis during the 1980s because demographic shifts and constraints are going to precipitate political, military, and economic pressures in the Soviet Union beyond any degree that the Soviets have thus far encountered. Until the present time, population and labor have been considered virtually free goods in the Soviet Union. The Soviet Government could obtain the number of people it desired at any time, in any place. This is no longer true and will definitely not be true in the 1980s. However, in order to place this forecast in proper context, one should have some appreciation of the profound demographic catastrophies which the Soviets have suffered since 1917. In 1917, there were 160 million people residing in the land area bounded by the Soviet Union's current borders. If one takes an average figure of 2% per year as a growth rate, then, by 1975, the population of the Soviet Union would have totalled 494 million. Compare this with the proud announcement by the Soviet Government in August 1975 that there were 250 million people living in the U.S.S.R. In other words, the Soviet Union lost nearly 100% of the population that it would now have due to the First World War, foreign interventions, the Civil War, famine, epidemics, collectivization, purges, and the Second World War. Of all of these, the Second World War was particularly significant for, according to our estimates, the Soviets lost 15 million men in the War; that is, three million more than were in our entire Armed Forces.

Major Soviet Demographic Trends

In discussing the projected crisis, Dr. Feshbach cited the following significant demographic trends:

- By the end of the century, we expect that the Soviet growth rate will drop from its present rate of 1% (1966 to 1970) to around 0.6%. This decrease is not due to any campaign for "zero population growth", for they just don't have such a formal drive in the Soviet Union. In Central Asia, however, the traditional value of having 5 sons is still very strong, so they generally have as many children as is necessary to acquire five sons. This may mean a family of 8 or 9. In fact, between 1959 and 1970, the average size of the family in Central Asia, including even those in the cities, has grown rather than declined, despite all efforts by the Soviets to restrain this growth through investment, urbanization, and social welfare programs. Obviously, this trend has implications with respect to a possible labor surplus on Central Asian farms. The big question is whether or not this surplus labor will migrate from Central Asia during the next decade. Even now, however, it's quite clear that these surplus farm workers in Central Asia will not move out of their home area in massive numbers. Some may move, but there will not be a mass migration which, in turn, will definitely lead to an economic slow-down and will therefore necessitate more industrial investment in this area. Of course, if, as it now appears, the labor supply just will not voluntarily move to Western Russia where the jobs are, the government could use guns to forcibly move these people -- but this introduces a whole new set of problems.
- Another important issue is the aging of the Soviet population and the demographic pattern of "over-age" people in the U.S.S.R. With respect to the Soviet Union as a whole, over-age people represented 10% of the aggregate population in 1950, but will increase to approximately 20% by the year 2000. However, in the five Soviet republics of Central Asia (i.e., the four principal Central Asian republics of Uzbekistan, Turkmenia, Kirgiziya, and Tadzhikistan, plus Kazakhstan), the situation will be very different. There, the proportion of the population in the over-age group will decline. Obviously, as previously indicated, these projections have a wide variety of implications in terms of manpower utilization, industrial location, social facilities, and many other socio-economic problems.
- Due to World War II, women have become an important segment of the working force. They constitute 30% of the construction labor force, performing both construction and clerical duties. The use of women is prevalent throughout the entire economy.

- Of particular importance with respect to Soviet demography is the fact that the country spans 11 time zones -- not merely 4, as is the case in our country. Ruling this broad expanse of territory by means of an authoritarian central government is a complex matter which involves the probability of regional problems -- specifically ethnic and nationality problems. Within the Soviet Union, there are between 100 and 140 different nationality groups and language groups -- depending on one's definition. Of these many groups, the five principal nationality groups of Central Asia are very important in the context of their growth in population. Although the growth rate for the country as a whole was 12 to 15% in the period 1959-1970, the rate in Central Asia was approximately 40%. This raises a major problem from the standpoint of the declining proportion of Great Russians in the total population of the Soviet Union to the point that they become a minority in their own country.
- During the past 2 years, we have observed something which appears to be extremely strange; that is, the aggregate death rate has increased by 0.6 per 1000 -- from 8.7 to 9.3, which is an astonishing increase in only one year. We currently have no idea what the explanation for this increase might be. This shift not only affects the older ages, but also it increases pressures with regard to the supply of defense manpower. Since 1971, we have also observed a major increase in infant mortality (i.e., from 22 per 1000 in 1971 to 28 per 1000 in 1974), for which we again do not know the explanation.

Consequences

As a consequence of the projected net decrease in the able-bodied age group in the 1980s, the Soviets will have to face and resolve the following questions:

- Where are we going to obtain the people that we need for our labor force?
- How are we going to move the people that we need in our labor force around to where they are needed? and
- What kind of administrative policies must we establish to ensure that the labor force will be where we need it?

Obviously, such a situation will intensify pressures to ensure greater labor productivity and capital productivity gains, and this is exactly what the Soviets are striving for in the current Five-Year Plan. Furthermore, they realize that, if they don't succeed now, they are going to be confronted with this precipitous decline in available manpower and with the enormous difficulties involved in bringing the Central Asians into the industrial, urban labor force. But, despite their efforts, it would appear that the Soviets are not going to be able to solve this problem anyway because:

- Their labor productivity gains over the last year are less than what the Plan called for;
- They need to allocate capital to buy agricultural goods; and
- They are trying to import technology in order to raise productivity, but they will have to raise productivity about three times the current level in order to have any chance of success.

In 1976, the Soviets made an institutional change which indicated that they are aware of this situation. This change involved the establishment of a new State Committee on Labor and Social Problems. Here, the question is one involving the definition of the word "Social". The Director of this new State Committee is the former Second Secretary of the Communist Party from Uzbekistan who is a Great Russian that has been brought back as the head of this organization. Certainly, he must be aware of the implications of the foregoing trends.

Military Implications

Turning to the military implications of the foregoing discussion, Dr. Feshbach cited the tremendous brouhaha in the Spring of 1976 concerning the size of the Soviet military forces. At that time,

- General Graham, then Director of the Defense Intelligence Agency (DIA), testified before Senator Proxmire that the Soviet Armed Forces totalled some 4.5 to 5 million men/women, but that he really believed that the figure was larger;
- Mr. William Colby, Director of the Central Intelligence Agency (CIA), also testified that the figure was about 4.5 million;
- The International Institute for Strategic Studies (IISS) in London published a figure of only 4.005 million; and
- A study by the Library of Congress reflected a figure of 4.8 million, which was generally accepted communitywide.

The problem was how to balance these figures. If there really were 800,000 more men in uniform than open sources indicated, where should this 800,000 be added -- not only in terms of the 1975 figures, but also for all the years before that? In attempting to find a way out of this quandary, Dr. Feshbach formulated the hypothesis that uniformed civilians constituted the basic cause of the problem and, in order to resolve the issue, he had to produce evidence that these uniformed civilians were being counted in the civilian labor force. This he did as follows for at least three out of five categories:

- First, with respect to the construction troops, Soviet and emigré sources can be cited which indicate that these personnel are:
 - Treated differently; and

-- Paid wages comparable to civilian construction personnel (not 3 to 5 rubles a month like an ordinary draftee, but 50 to 60 rubles a month and higher).

- Second, with respect to medical personnel, it is clear that the Soviets didn't include this manpower in the Armed Forces data which they published in January 1959. In 1959, the Soviets announced that their Armed Forces numbered 3,623,000 personnel, of which 632 were women -- not 632,000, but 632! That's utterly impossible, unless military medical services are not included. As James Reitz pointed out, two-thirds of the combat doctors in the Second World War were female, and eighty-five percent of the Soviet medical service personnel is now female. Furthermore, in reviewing Soviet budget data, there is a citation by Abraham Becker concerning a transfer from the Ministry of Defense (MoD) budget to the Ministry of Public Health budget in 1961-62, which would indicate that funds for military medical services were incorporated in the Ministry of Public Health budget.
- Finally, with respect to the dining hall, post exchanges, and like activities, the balance sheet for the military trade system is known to be included in the total, published retail trade figure for trade turn-over.

On the basis of the foregoing evidence, Dr. Feshbach adopted the four million figure published by the IISS -- confident that the other 800,000 personnel should be included in the figures for construction, medical, and other service personnel. However, he actually selected a figure of 4.5 million in order to give the Soviets "the benefit of the doubt". If the figure is actually 4.8 or 5.2 million, then the Soviet military manpower situation will be much worse in the critical period of the 1980s.

In 1959, the able-bodied age group numbered approximately 120 million; this figure is important as a base. The Soviets were extremely worried about the size of their labor force in 1961 so, in that year, they drafted two cohorts to compensate for the shortage of nineteen-year-old draftees entering the military service. The average annual increment during the period 1959-65 was approximately 740,000. This increment doubled in the late 1960s and expanded to 2,500,000 in 1971-75, but declined a bit in the late 1970s. In the 1980s, however, this increment will decline sharply to approximately 540,000 (in the period 1981-85) and 570,000 (in the period 1986-90). However, the first thing that must be done with respect to these figures is to eliminate the individuals pursuing a full-time education -- which amounts to about 400,000 to 450,000 for this period of time. Life expectancy tables indicate that 4,000 per year will die from various causes, and another 10% will be lost due to deferments, exemptions, and similar circumstances -- some of whom will presumably return two years later for conscription. The Soviet manpower situation is further exacerbated by regional problems. For example, by the end of this century, estimates indicate that fully one-third of the 18-year-old cohort will come from the southern, less Russian-speaking and less mobile sectors.

These are the less industrialized, less urbanized, and less technologically oriented areas. Looking at the Soviet manpower situation from this viewpoint and excluding any questions of military force structure, it would appear that the Soviets have some real problems, which is the basic thrust of this discussion -- that is, address the Soviet manpower issue from a demographic-economic standpoint, as opposed to simply examining the issue from a military point of view.

Finally, it would appear that we do not know enough about Russian language training in the Soviet military establishment. There are cases cited of sergeants who are the intermediaries between the Russian-speaking officers, who give the commands, and the non-Russian speaking soldiers. In this context, there is a big drive to create a sense of Soviet inter-nationalism -- making everybody Soviet and making everybody learn Russian -- but it has been very unsuccessful thus far, and the 1980s are not that far away.

"A Technique for Assessing Selected Elements of Soviet Military Manpower"
by Ms. Harriet Fast Scott

Ms. Scott described the "iceberg" technique that is being utilized in ongoing assessments of Soviet military manpower in such defense-related sectors as:

- Civil defense;
- The Soviet All-Union Voluntary Society for Cooperation with the Army, Air Forces, and Navy (DOSAAF);
- The military commissariat system; and
- Initial military training.

This technique is so identified because it is based upon the assumption that, by identifying the general officers and other senior officers at the top of a military organization (i.e., "tip of the iceberg"), one can project the organization beneath them and estimate its size.

Utilizing this technique, Ms. Scott has thus far identified 47 general officers working fulltime in civil defense. Of these, more than 40 currently appear to be on active duty. However, in estimating the total number of Soviet general officer positions in the civil defense "iceberg", it would appear that:

- At the Ministry of Defense level (in the office and on the staff of the Chief of Civil Defense) there are . . . 12
- At the level of military staffs for civil defense:
 - The number of Chiefs of Staff for Civil Defense within the 15 republics of the Soviet Union is 15
 - The Deputy Chiefs of Staff for political matters in the offices of the Chiefs of Staff in the 15 republics also number 15

| | | |
|----|---|-----------------|
| -- | The Officer-in-Charge of Civil Defense in the Moscow Oblast and the Senior Civil Defense Officer for the city of Moscow account for | 2 |
| • | At the level of Troops of Civil Defense: | |
| -- | The number of Deputy Commanders for Civil Defense within the headquarters of the 16 military districts of the Soviet Union is | 16 ¹ |
| -- | There is also the Commandant of the Civil Defense School | 1 |
| | TOTAL | 61 |

Therefore, although the absolute minimum of Soviet general officers assigned to civil defense is estimated to be 61, a more realistic estimate of the number of Soviet general officers assigned to civil defense duties may well be in the order of 80-120.

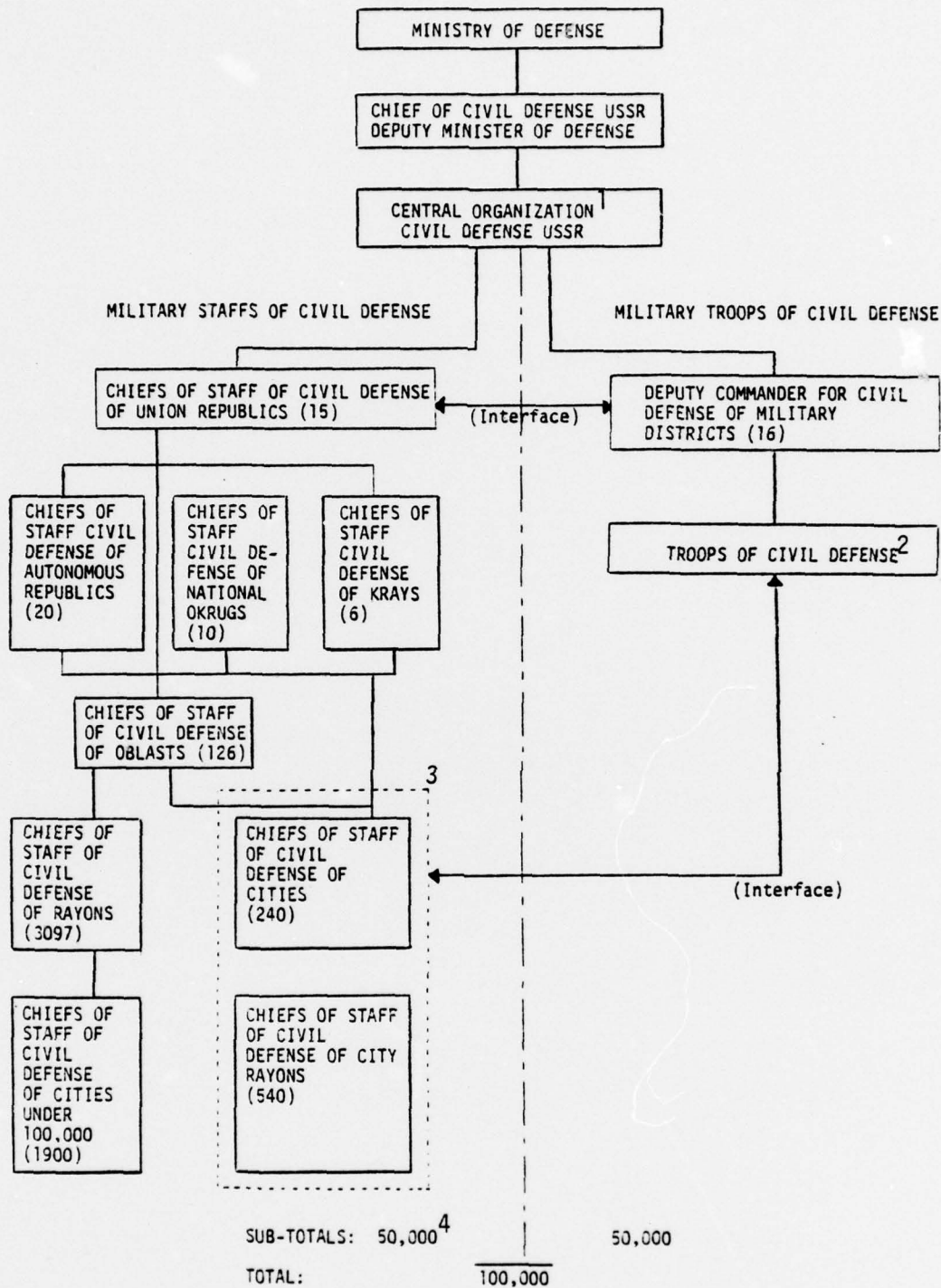
With regard to other Soviet officers in civil defense and referring to the overall structure of Soviet civil defense in Figure 1, a sufficiently large number of colonels at the oblast level (i.e., generally equivalent to a U.S. state) have been identified to assume, with some degree of confidence, that at least one colonel is assigned to each of the 162 Soviet oblasts -- to include autonomous republics, national okrugs and krays. Furthermore, officers are to be found in civil defense activities in each of the 240 Soviet cities with populations exceeding 100,000 persons (many of which are further divided into regions) and in some smaller cities which appear to warrant a civil defense staff. In all, then, the total number of Soviet officers, other than general officers, involved in civil defense may be estimated as follows:

| | | |
|----|--|-----|
| • | Administrative units within the Soviet Union which appear to have Chiefs of Staff for Civil Defense in the grade of colonel are: | |
| -- | Autonomous republics | 20 |
| -- | National okrugs | 10 |
| -- | Krays | 6 |
| -- | Oblasts | 126 |

¹ These positions were apparently established in 1972 when General Altunin became the new Chief of Soviet Civil Defense. To date, six general officers have been identified by name in these positions. It simply takes time to identify all of the Soviet general officers who occupy these and other civil defense positions in Soviet periodicals.

Figure 1

THE OVERALL STRUCTURE OF SOVIET CIVIL DEFENSE



- 1) Figures in parenthesis reflect the numbers of union republics, military districts, republics, and other organizational entities.
- 2) A detachment or larger unit in every major Soviet city
- 3) Cities larger than 100,000
- 4) Military personnel on civil defense staffs

-- Cities over 100,000 240

Total Number of Colonels . . . 402

- Administrative units within the Soviet Union which appear to have Chiefs of Staff for Civil Defense in the grade of lieutenant colonel, although some positions might be filled by majors, are:

-- Regions of cities, where large cities are subdivided into regions of 100,000 540

-- Rayons or regions which are not parts of cities 3097

-- Cities of less than 100,000, but which appear to warrant a civil defense staff . . . 1900

Total number of lieutenant colonels
(and some majors) in civil defense
assignments as Chiefs of Staff 5537

- Each Chief of Staff for Civil Defense has a staff which may well include an officer for each of 13 civil defense services. Of course, in some areas, several of these services might be performed by one officer. However, it would be reasonable to estimate 8-10 military officers assigned to the civil defense staffs of each of some 5,000 krais, oblasts, cities and rayons which would indicate a total of approximately 45,000

In summary, then, utilizing the "iceberg" technique and rounding the sum of the foregoing figures, the total number of Soviet officers involved in Soviet civil defense activities is estimated to be in the order of 50,000. As for the Troops of Civil Defense, there is probably a detachment or larger unit in each major city (over 100,000) -- of which there are 240. A detachment or larger unit of an average size of 200 men for each city would therefore equal nearly 50,000 Troops of Civil Defense. Overall, it would therefore appear that there are some 100,000 military personnel involved in the Soviet civil defense system -- 50,000 of which are Troops of Civil Defense and the other 50,000 of which are military personnel on the staffs of the hierarchical structure shown in Figure 1.

GENERAL DISCUSSION

Following the presentations, a general discussion ensued which reflected not only an expansion upon the subject matter presented by each of the panelists, but also items of particular interest to the participants in the seminar. The highlights of this general discussion, which contained a number of suggestions for new or expanded research, may be generally summarized in terms of major topics as follows:

The Length of Military Service and the Reserves

- Any change in the length of Soviet military service will probably be due to operational requirements -- which vary considerably from area to area. The Soviets appear to be making some rather careful adjustments before they release personnel from military service, but it does not seem to be working in a very uniform fashion. It is anticipated that the Soviets will be constantly shifting the nature of their military deferment pattern as well as their reserve officer pattern. It's not a matter of keeping all personnel; it's just that they are trying to retain some personnel longer.
- The Soviet program for reserve forces is colossally incompetent and gigantically expensive, but the Soviets do prefer reservists, and they do pay the price for them.
- If the Soviets extend the length of military service, they will further decrease the availability of manpower for the civilian economy where manpower shortages are already becoming quite desperate.
- It would appear that the Soviets put young men through the military system for reasons other than solely military requirements. Military service is a good way to give Soviet youth some political indoctrination, and having a half million men less in uniform during the 1980s would not terribly alarm the Soviets.

Military Training

- The Soviets apparently regard the individuals who are trained to fill long lead-time, high security-sensitive positions (such as in the Soviet missile forces and air forces) as long-tenure personnel and offer them rapid advancement and other inducements. However, these inducements have created other problems involving the development of warrant officers, a lack of respect for young sergeants, and excessive expectations on the part of these young, technically skilled individuals.
- The Soviets have discovered that premilitary training doesn't really provide any training at all. So, they now give each conscript six months of training before assigning him to an operational unit where he can fill a job slot, such as that of a driver of an armored personnel carrier (BMP). This will do very well for some 14 or 15 months, but the system totally precludes cross-training. Therefore, some of the elements of low-level, but important, tactical effectiveness which they wish to achieve are precluded by the very system that they are operating.

- The best and most perceptive questions with regard to the effectiveness of Soviet military training have not come from the military, but from the main political administration.
- The Soviets have apparently concluded that they need a super-service element to determine which billets should be occupied by conscripts and which should be occupied by extended-service personnel. In this context, we should initiate a thorough study of the Soviet enlisted personnel management system.
- The increased length of technical training in the Soviet Armed Forces appears to have been offset to some extent by the procurement of individuals with good technical backgrounds, the efficiency of training, and on-the-job training.

Groups of Soviet Forces/Germany (GSFG)

In discussing the GSFG, Professor Erickson made the following observations:

- The GSFG is an extremely lean and tough, but quite efficient, military organization. It's a hard-working, hard-training army with an extremely efficient staff and an air force that's become an all-weather force.
- The officer corps has a very good background, has been given excellent training, and has quite a reasonable level of professionalism, but there has been no test of how it would perform under wartime conditions.
- The equipment of the GSFG is simple, robust and "soldier proof".
- Chemical warfare training is realistic and is taken seriously -- which must presage battlefield use.

Motivation and Living Conditions Within the Soviet Armed Forces

- The Soviet officer corps is not properly motivating the troops, for whenever a problem arises, the solution seems to be to preach to the junior officers about motivation. Senior Soviet officers can be extremely arrogant; and the junior officers just get "kicked around".
- No man who enters the Soviet Armed Forces should expect an easy life, though some of the hardships are simply the result of indifference.
- There has been a general tightening of discipline within the Soviet Armed Services and, though the Soviet soldier is certainly

better off than he was 20 years ago, the improvement in his conditions is not as much as is sometimes alleged.

- There has been a decline in the desirability and prestige of a military career in the Soviet Union because professional and material advantages which were formerly available primarily in the privileged environment of the military are now available at least as readily in the civilian sector.

Soviet Perceptions of Their Manpower Problems

- The Soviets are well aware of their massive manpower problems, but they are trying stopgap measures -- rather than really coming to grips with the problems. They face the issue of whether to try and paste their system together here and there or whether a quantum leap is necessary.
- Soviet definitions of what constitutes efficiency and effectiveness may be fundamentally different from ours. In this context, efforts should be made to define Soviet perceptions of their own efficiency and the measurements which they use to evaluate efficiency.
- An historical approach to the assessment of Soviet military manpower and how it would perform in time of war would be very worthwhile. In this context, the Soviets have historically displayed an institutional rigidity and a *fundamental* reluctance to innovate institutions.
- According to Professor Erickson, Soviet perceptions of their own military shortcomings include:
 - The skill, education and performance of their officer corps, especially at the lower levels;
 - Morale and motivation;
 - The physical capabilities of the modern Soviet soldier as compared with those of his father;
 - Slowness and incompetence in the introduction of advanced equipment into their units, coupled with the lack of success in attaining rapid innovation; and
 - A certain tremulousness, or nervousness, as well as a sense of misgiving, which cannot be completely denied or hidden, with regard to the ultimate performance of their own troops.

The Civilian Labor Force

- Although the Soviet labor force does include a significant number of "hidden reserves" (i.e., a full 50% of their production workers

are what we call auxiliary workers), Soviet efforts to tap these reserves for other employment face severe obstacles, such as the modernization of their industrial plant processes and procedures -- which would require large and expensive purchases of mechanization technology and facilities from the West and are beyond the capital means of the Soviets to afford.

- The Soviet civilian manpower situation is further aggravated by internal labor migration patterns, which are not highly favorable for the economic development of the country. People are leaving the areas which the Soviet Government has been attempting, at great expense, to populate and develop (e.g., Siberia and the Far East), but they are not migrating towards industry, for there is little industry in the South. This development has economic significance and strategic implications as well.
- The Soviet manager has a continuing problem in terms of labor rationalization which involves such factors as output maximization, minimum costs, and more bonuses for workers who produce -- all of which encourage "featherbedding" or maintaining surplus labor on hand in order to accommodate unanticipated changes in production demands and political or seasonal vicissitudes. The Soviets could change the rules that relate to "featherbedding", but that would involve political costs to the Party which it does not wish to incur. However, by the 1980s, the underlying economic costs due to these pressures may be substantial enough to force the Soviets to change their rules. This is an area that we should study.

The General Quality and Implications of Soviet Education

- The rapid expansion of the Soviet general educational system poses the serious danger of a glut of people who expect to hold jobs appropriate for a B.A. or M.A.
- Perhaps half of the Soviet engineers are trained in correspondence and evening schools -- which certainly says something about the quality of Soviet engineers.
- Specialties in terms of the Soviet educational system are much narrower than those in the U.S., especially in engineering.
- At the present time, two-thirds of the male college-educated cohort are Party members -- the same situation is true in the Soviet Armed forces, which raises such difficult questions as:
 - Will the Soviets enlarge the Party, but maintain the same proportion of male, college-educated members, or will they intentionally thin it out?
 - Will they keep the Party small and permit it to become relatively more isolated with respect to this vital element of Soviet society?

- Which way will the military go as this situation develops, particularly the officer corps?
- Will the Soviets try to maintain or increase the number of Party members in the military?
- If so, would not the military become relatively the most Party-based element of the Soviet elite?
- In response to such questions, Ms. Scott stated that in view of recent trends, it would appear that the Soviet military will have a smaller voice in the Party. Professor Erickson, on the other hand, felt that the real battle will involve the degree to which the military's managerial ambitions are satisfied in the coming regime. In other words, will the military be advanced as a professional body for certain institutional reasons and, obviously, for political reasons? A lot will depend upon the manner in which Soviet leadership either accommodates or turns aside the military. In Professor Erickson's opinion, the battle to which he alluded will transcend the classic Soviet Army vs Party lines.

The "Iceberg" Technique

- In discussing the "iceberg" technique for estimating Soviet defense manpower, it was observed that the mere fact that an organizational structure exists on paper and that the top command positions are filled is no guarantee that positions below the "tip of the iceberg" are indeed occupied. As a matter of fact, in a situation involving manpower shortages, the Soviets will be tempted to partially staff military organizations, rather than to dismantle them -- thereby creating an organizational shell which is difficult to assess in terms of manpower.
- On the other hand, it was argued that a vast number of people are processed annually by the Soviet commissariats and that the variety of functions involved certainly requires a significant amount of manpower -- even though it may not be possible to identify all of those individuals who are performing these functions.
- Filling an organizational position with "a body" does not mean that "the body" is necessarily qualified to fill the position -- and there are indications that this may occur in Soviet paramilitary organizations, such as DOSAAF. So, large Soviet bureaucracies must be studied very carefully in order to determine whether they actually do anything and how effectively they function -- particularly in view of the possibility that some of the top levels may afford comfortable positions for military pensioners.

Research on Soviet Military Manpower

- Professor Erickson outlined a general program for expanding and improving research on the subject of Soviet military manpower as follows:
 - Encourage more qualified people to do research on Soviet military manpower;
 - Invite a dozen young Sovietologists (not necessarily military manpower specialists, but good thinkers who may never have addressed these kinds of questions at all) to study the available literature on these problems and allow them to approach the problems in their own way -- perhaps at the National War College;
 - Study the Soviet military institutional framework in order to permit the proper ordering of micro studies of Soviet military manpower;
 - Involve more individuals in the studies who can read Russian and can take advantage of the wealth of information available in Russian open source literature;
 - Develop a compendium of relevant terms, to include their meanings and their usage -- in particular, a glossary pertaining to the technology of training.
- It is really not accurate to talk about Soviet defense manpower at large -- lumping together the Air Forces, the Ground Forces, and the Navy -- because studies of each of the Services will result in different conclusions. Soviet naval manpower planning, for example, is really excellent.

Some Initial Observations with Regard to Implications

Some initial observations and questions by seminar participants with regard to possible implications of the foregoing panel presentations and general discussion may be briefly summarized as follows:

- If the Soviet Union is going to encounter manpower problems of increasing magnitude in the near term, the Soviets are going to have to become more efficient, which means that they must continue to modernize their industry through the application of western technology. This need would seem to provide the United States with some leverage, though this leverage may be quite limited and, if applied too forcefully, could be counterproductive. In this context, the question for the Soviets is whether or not their regime can resist the expanded aspirations within their society. At the same time, the problem for the U.S. is that of drawing the fine line between being able to apply firm, but steady, leverage -- giving the Soviets what they want without going so far that they feel that they must resist whatever we are trying to do.

- If the Groups of Soviet Forces/Germany (GSFG) is a very good army, then the armored tactics which are being adopted by both the U.S. and West German Armies might be invalid. If the GSFG does have organizational and control problems, then these tactics appear to be valid.
- If the Soviet Union and the Soviet military are faced with a crisis which their present system will find to be insoluble and if they wish to keep their basic system, what can they do to resolve this predicament and, if they decide to go something drastic to solve their problems, would their course of action be likely to affect the United States?
- If the U.S. Navy wishes to assess the operational readiness and effectiveness of the Soviet Navy (as opposed to the weapons characteristics and order of battle of the Soviet Navy), it will be necessary to learn more about the people who man the ships, who shoot the weapons, and who make the plans for their naval operations. In this context, we are just now beginning to turn our attention to the fact that there are people in the Soviet Navy, that these people have a national character, that they receive certain types of training, and that this national character and training bear implications for the readiness and the effectiveness of the Soviet Navy. Obviously, this observation applies to the other Services as well.
- If a major Soviet shortcoming is a fundamental, historical reluctance to innovate institutions, then this characteristic may provide a key to the better understanding of both the military and civilian manpower sectors. In this context, we must invest as much time, effort, and perceptiveness to the study of the characteristics of Soviet military manpower as we have devoted to analyzing the numbers of this manpower to date.

CONCLUSIONS AND RECOMMENDATIONS

Bearing in mind the exploratory nature of this brief seminar, it was nonetheless apparent that the seminar was generally successful in achieving its overall objectives of highlighting some of the major problems involved in assessing Soviet defense manpower and discussing a number of the issues and possible research topics associated with these problems. Although there was no attempt to attain a consensus with regard to any of the problems and issues discussed, it did appear that there was a general consensus that, although the Soviet Armed Forces do constitute a formidable threat, the Soviets are not without some serious manpower problems which warrant continuing study in order to better assess the implications for the United States. Some of these major problems were identified as follows:

- The decrease in the pool of available manpower during the 1980s;

- The increase in ethnic minorities -- the Central Asians, in particular;
- The pervasiveness of "featherbedding";
- The implications of the rapid expansion of the educational system;
- The overall quality (skill, education, and performance) of the Soviet officer corps -- the lower ranks, in particular;
- The underlying morale, motivation, and ultimate performance of the Soviet troops themselves; and
- The fundamental reluctance of the Soviets to innovate institutions.

The panel presentations and general discussion also raised a number of questions which appear to warrant further investigation and discussion; for example:

- Have the Soviets determined that their premilitary training program "doesn't really provide any training at all", so that each conscript now receives six months of training before assignment to an operational unit?
- Is the Soviet program for reserve forces really so "colossally incompetent and gigantically expensive" in terms of the Soviets' ultimate readiness for war?
- Is it possible that "having a half million men less in uniform during the 1980s would not terribly alarm the Soviets"?
- Do "the best and most perceptive questions with regard to the effectiveness of Soviet military training" really come from the main political administration?

Furthermore, in the case of some of the issues discussed, there was a divergence of opinion; for example, the ultimate validity of the "iceberg" technique in assessing the numbers and structure of manpower in the Soviet Armed Forces and the future role of the Soviet military in the Party.

Finally, there were a number of areas suggested in terms of new or expanded research on the subject of Soviet defense manpower. Some of these may be briefly identified as follows:

- The development of a compendium of Soviet defense manpower and manpower-related terms, to include their meanings and usage, with particular reference to technical training terminology;

- An expansion of the studies of the Soviet institutional framework in order to permit the proper ordering of micro studies of Soviet military manpower;
- An increase in the utilization of Russian open source materials for manpower research purposes;
- An assessment of the implications of "featherbedding", particularly with respect to the utilization of Soviet military manpower in non-military or paramilitary activities;
- Additional research on the following aspects of Soviet officer and enlisted manpower and the implications with respect to operational readiness and effectiveness:
 - National and geographic characteristics,
 - Demographic trends,
 - Quality (skill, education, training, and performance),
 - Morale and motivation,
 - Innovative capabilities, and
 - Language/ethnic barriers;
- An expansion of the research on the costs and effectiveness of Soviet reserve manpower; and
- An analysis of the implications of the increased utilization of women in the Soviet Armed Forces.

In conclusion, it is strongly recommended that the foregoing problems, questions, and suggested areas of research be given due consideration in the definition and conduct of ongoing and future assessments of U.S. vs U.S.S.R. defense manpower.

APPENDIX A

A LIST OF THE PARTICIPANTS IN THE SEMINAR

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A LIST OF THE PARTICIPANTS IN THE SEMINAR ON SOVIET DEFENSE MANPOWER

January 28, 1977

| <u>Individuals</u> | <u>Position and/or Agency</u> |
|----------------------------|--|
| ● Mr. John F. Ahearne | Principal Deputy Assistant Secretary, Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs) |
| ● Mr. Robert E. Berry | Deputy Director (Policy and Planning), Office of the Director of Defense Research and Engineering |
| ● Mr. Martin Binkin | Senior Fellow, Foreign Policy Studies and Defense Staff, Brookings Insti- tution |
| ● Mr. Donald Burton | Chief, Program Analysis Division, Office of Strategic Research, Central Intelligence Agency |
| ● Dr. Steven Canby | Consultant |
| ● Mr. Steven Chase | Director, Manpower Research and Analysis Group, Central Intelligence Agency |
| ● Mr. Edward M. Collins | Deputy Director for Intelligence Research, Defense Intelligence Agency |
| ● Mr. Anthony H. Cordesman | Special Assistant to the Director of Defense Intelligence for Performance Evaluation, Office of the Assistant Secretary of Defense (Intelligence) |
| ● Mr. Gary B. Crocker | Office of Political, Military and Theater Forces, Bureau of Intelligence and Research, State Department |
| ● Mr. John Donaldson | Tactics and Organization Section, Defense Intelligence Agency |
| ● Dr. Warren W. Eason | Executive Secretary, American Associ- ation for the Advancement of Slavic Studies |

| <u>Individuals</u> | <u>Position and/or Agency</u> |
|--------------------------------|---|
| ● Professor John Erickson | Director of Defence Studies, University of Edinburgh |
| ● Dr. Murray Feshbach | Chief, U.S.S.R./East Europe Branch, Foreign Demographic Analysis Division, Department of Commerce |
| ● Mr. Robert Gallagher | Senior Advisor to the Special Assistant to the Secretary of the Treasury |
| ● Lt. Col. Frederick Giessler | Military Assistant to the Director of Net Assessment, Office of the Secretary of Defense |
| ● Col. Herman Gilster | Director of International Economic Affairs, Office of the Assistant Secretary of Defense (International Security Affairs) |
| ● Dr. Robert N. Ginsburgh | Senior Analyst and Moderator, Net Assessment Programs Office, General Electric Center for Advanced Studies |
| ● Mr. Robert L. Goldich | Specialist in National Defense, Con- gressional Research Service, Library of Congress |
| ● Mr. Sidney Graybeal | Director, Office of Strategic Research, Central Intelligence Agency |
| ● Dr. John P. Hardt | Senior Specialist in Soviet Economics, Congressional Research Service, Library of Congress |
| ● Mr. Bruce Hoffer | Ground Order of Battle Section, Defense Intelligence Agency |
| ● Professor Edward Keenan | Director, Russian Research Center, Harvard University |
| ● Mr. Robert Leavitt | Chief, Military Expenditures Section, Defense Intelligence Agency |
| ● Capt. William H.J. Manthorpe | Head, Naval Warfare Capabilities Department, Naval Intelligence Sup- port Center |
| ● LTC. Fred V. Manzo | Senior Soviet/East European Military Intelligence Officer, Office of the Assistant Chief of Staff for Intelli- gence, Department of the Army |

Individuals

Position and/or Agency

- Mr. Andrew W. Marshall
Director of Net Assessment, Office of the Secretary of Defense
- Dr. Gordon C. McMeekin
Senior Comparative Analyst and Rapporteur, Net Assessment Programs Office, General Electric Center for Advanced Studies
- Mr. Rex D. Minckler
Manager, Net Assessment Programs Office, General Electric Center for Advanced Studies
- Mr. J. Dale Pafenberg
Special Advisor to the Assistant Chief of Staff for Intelligence, Department of the Air Force
- Mr. John W. Parker
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APPENDIX B

REPORT DOCUMENTATION PAGE, DEPARTMENT OF DEFENSE FORM DD 1473

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| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) No net assessment of the overall military capabilities of one nation vs those of another nation would be meaningful without a detailed evaluation of the defense manpower of both nations -- their major characteristics, similarities, dissimilarities, strengths, and weaknesses. In the case of the United States, the collection, analysis and organization of data on defense manpower tends to be a relatively straightforward process, but Soviet defense manpower is seldom studied in depth because the process is generally quite difficult, time- | | |

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consuming, and demanding.)

In this context, a seminar on Soviet defense manpower was planned and conducted by the General Electric Center for Advanced Studies (GE-TEMPO) for the Director of Net Assessment, Office of the Secretary of Defense (OSD/NA), and the Assistant Secretary of Defense, Manpower and Reserve Affairs (ASD/M&RA) on January 28, 1977. The overall objectives of this seminar were to highlight some of the major problems involved in assessing Soviet defense manpower and to discuss some of the approaches to these problems.

This report presents not only a summary of the highlights of the seminar, but also some conclusions with regard to problems and issues which appear to warrant further research. The panel presentations which served as the basis of the general discussion during the seminar are identified as follows:

- "Some Observations on the Quality of Soviet Manpower" by Professor John Erickson,
- "An Overview of the Manpower in the Soviet Military-Industrial Complex" by Mr. James T. Reitz,
- "Soviet Demographic Trends and Possible Implications for Soviet Defense Manpower Planning" by Dr. Murray Feshbach, and
- "A Technique for Assessing Selected Elements of Soviet Military Manpower" by Ms. Harriet Fast Scott.

Some of the major Soviet problems identified during the course of the seminar were as follows:

- The decrease in the pool of available manpower during the 1980s;
- The concurrent increase in ethnic minorities -- the Central Asians, in particular;
- The overall quality (skill, education, and performance) and stability of the Soviet officer corps -- the lower ranks, in particular; and
- The underlying morale, motivation, and ultimate performance of the Soviet troops themselves in the event of war.